

THURSDAY, AUGUST 13, 1903.

## THE UNIVERSITY IN THE MODERN STATE.

## V.

SINCE the earlier articles under the above heading appeared, the views we have attempted to express touching the importance of universities in the lives of States and even of Empires from a national or political, as well as from an academic point of view, have been strengthened in a remarkable manner by the inauguration of a new movement in relation to the universities of the British Empire.

The important departure to which we refer is due to the initiative of Sir Gilbert Parker, and was recently discussed at a conference in London, at which official representatives, specially approved by every one of the governing bodies of degree-conferring universities throughout the Empire, including Canada, Australia, New Zealand, and the Cape of Good Hope, as well as the home institutions, were present. By the kindness of one of the delegates we were enabled to give an account of what took place at the time. The publication of a full account of the proceedings, which has now appeared in the *Empire Review*, enables us to enter into some details.

One of the most important and interesting announcements made during the meeting, showing how much may spring from a closer union of university with other national aims, was made by Sir John Buchanan, the Vice-Chancellor and delegate of the Cape of Good Hope University, who reported that the first step to the union of the different States of South Africa had been accomplished by the Cape University, which this year, for the first time, had conducted its examinations in each of the five States of South Africa at the request of the Governments of the several States.

Now that this conference has taken place, we are in a position to gauge its importance. There is no question that a movement has been begun which is bound to go on from strength to strength; which, if the committee appointed does its work thoroughly, will bring all information bearing upon our university organisation together, and so enable a levelling up process to go on. Nothing is more distressful in English history than the way in which, since the introduction of scientific processes into modern civilisation, our schools and universities, for want of proper endowment for the new learning, have failed to provide the scientific spirit and the brain power which are now recognised as the most important weapons in a nation's armoury, and with which, to our detriment, the competing nations are now so fully equipped.

The Prime Minister in his admirable speech at the inevitable dinner left no doubt as to the origin of our present backwardness. While properly pointing out that the collective effect of our public and secondary schools upon British character cannot be overrated, he frankly acknowledged that the boys of seventeen or eighteen who have to be educated "do not care a farthing about the world they live in except in so far as it concerns the cricket-field or the football-field or the river." On this ground they are not to be taught

science, and hence, when they proceed to the university, their curriculum is limited to subjects which were better taught before the modern world existed, or Galileo was born.

The first great result of the conference was the distinct recognition of the importance of arrangements for the mutual benefit of all the academic bodies in the Empire, and this complete agreement is all the more satisfactory at a time when the question of fiscal arrangements is dividing the country into two hostile camps. Again, the absence of such academic arrangements at present was shown to be detrimental. Unlike the fiscal problem, therefore, on the proper discussion of which much time may be spent, the university problem may be tackled at once, and we need not delay to profit by any benefits it may bring.

The resolutions passed at the conference were as follows:—(1) In the opinion of this conference it is desirable that such relations between the principal teaching universities of the Empire should be established as will secure that special or local advantages for study, and in particular for post-graduate study and research, should be made as accessible as possible to students from all parts of the Empire. (2) That a council consisting in part of representatives of British and colonial universities be appointed to promote the objects set out in the previous resolution, and that the following persons be appointed a committee to arrange for the constitution of the council:—Lord Kelvin, Lord Strathcona, Mr. Bryce, M.P., Mr. Haldane, M.P., Sir William Huggins, Sir Michael Foster, M.P., Sir Oliver Lodge, Sir A. Rücker, the Rev. Dr. Mahaffy, the president of Magdalen College, Oxford, the president of Queens' College, Cambridge, the Hon. W. P. Reeves, and Sir Gilbert Parker, M.P.

One of the most important matters raised in connection with the first resolution was the value of the education imparted in the British universities in relation to those of other countries. Sir John Buchanan told the conference that they were endeavouring at the Cape to send their best graduates abroad for further training, "and it was much to be regretted that at present those students could not always get what they sought for in the mother country."

In the United States, where the university system is more complete and far better endowed than with us, the students who wish to go afield for further study do not come to Britain, they go to Germany or France, and before we can expect colonial students to come to the mother country exclusively, our university system will require to be brought up to date, which can only happen when many millions are available for proper endowments, in other words, when the principle of State endowment already accepted has been effectively acted upon.

If one effect of the conference is to bring this home to the minds of those who have to deal with such matters, it will have already accomplished an important work when as great freedom and facility for study and research can be obtained within the King's dominions as are available elsewhere.

That the facilities referred to by the colonial university authorities included ample means for the prosecution of original research was made perfectly

clear, and to this part of the inquiry Prof. Ewing contributed a most important statement as to the educational value of research as demonstrated by his experience at Cambridge. We may hope that at least after thirty years' debate this matter can be considered settled. In the language of our correspondent, "Since Germany has given to our disadvantage a definite experimental proof of the success of research as an instrument of education, the delegates probably felt that the matter had gone beyond the range of academic discussion."

When once this idea of the proper function of universities is re-established and in full operation, not only at Oxford and Cambridge, but in many other British universities, it may happen that not everybody will agree with Mr. Balfour's comparisons between the old and the new seats of learning.

"I daresay that many of us have looked back with a certain regret, and a certain feeling of shame, to the medieval passion for learning without fee and without reward—with no desire to make the universities stepping-stones to good places or to successful mercantile or industrial undertakings—but with an ideal which made thousands of students from every country in Europe undergo hardships which would be regarded in these softer days as absolutely intolerable, for the sole purpose of seeking, and it might be finding, the great secret of knowledge. We despise, and we perhaps rightly despise, their methods. We know that they were not in touch with the actual realities of the world in which they lived. Yet, after all, we have something to learn from them; and if we in these days could imitate their disinterested passion for knowing and for extending the bounds of knowledge, surely we, with our better methods, and our clearer appreciation of what we can know and what we cannot know, might accomplish things as yet undreamed of. Now, what did they do? They moved from university to university, from Oxford to Paris, from Paris to Padua, from country to country, in order that they might sit at the feet of some great master of learning, some great teacher who might lead their thoughts into undreamed of paths. I hope that in the universities of the future every great teacher will attract to himself from other universities students who may catch his spirit—young men who may be guided by him in the paths of scientific fame; men who may come to him from north or from south."

We agree as to the facts as to the past, but it is not the carelessness and greed of the modern student that are in question, but rather the decadence of our universities, which are no longer seats of learning in the old sense, that is, they do not supply the knowledge most useful to those who attend them in relation to the needs of the time. They are chiefly conducted as playgrounds for the sons of the rich, learning is too little endowed, and great teachers are too little encouraged, especially in the matters in which the modern world is concerned.

If only students of science found at our universities of to-day what students of theology, law, medicine, and *les trois langues*, found in the old time at all universities, that is, perfect teaching, and the endowment of research at the university itself, things might be righted, and, as of old, many fitted for the battle of life would go out into the world to apply their knowledge as did their forerunners, and show neither more

nor less "disinterested passion" than the well paid ecclesiastics, lawyers, and doctors of the past.

It is because the universities of Germany, France, and the United States, aided by wisdom and endowments, conform to the old ideal, while our ancient ones remain as *hauts lycées*, as Matthew Arnold called them, and our modern ones are crippled for want of funds, that the students of both Britain and Greater Britain find an advantage in going abroad to build up their brain power.

It is to be hoped that as a result of the conference the educational federation of the Empire will some day be brought about. It must not be forgotten that the first step in this direction was taken when the Royal Commissioners for the Exhibition of 1851 founded its research scholarships, in which every university in the Empire has a share—a share which it has fully used, and with the best effects. That other similar scholarships should be founded by the different Governments and private individuals may be one of the results of the conference.

Our plea for better brain power for the nation was not lost sight of in the deliberations, and we may fitly conclude by the following quotation from a speech by Mr. Haldane, which brought the discussion to a close.

"To-day we are a step further on towards doing that which, as a people, as the great English-speaking people, we need more than anything else. We have got the splendid energy of our race, we have got the power which is ours, in a unique degree, of adapting ourselves to new conditions, of overcoming difficulties which to others might even seem to be insurmountable, and yet we have been deficient in the capacity of organisation. What we have lacked in this country, somehow, has been the thinking faculty; and it is the work of education to develop the thinking faculty in a nation. And never before was the thinking faculty so much needed as to-day when the weapons which science places in the hands of those who engage in great rivalries of commerce leave those who are without them, however brave, as badly off as were the dervishes of Omdurman against the Maxims of Lord Kitchener."

#### THE SPECTROSCOPE IN ASTRONOMY.

*Problems in Astrophysics.* By Agnes M. Clerke. Pp. xvi+567. (London: A. and C. Black, 1903.) Price 20s. net.

THE triple alliance of astronomy, physics and chemistry has extended the boundaries of each in unexpected directions. Astronomy is no longer a dependency of mathematics, but an independent power having a high place in the hierarchy of the physical sciences; instruments of research in physics have been turned from earth to sky, and chemistry now looks to the stars for evidence as to the distribution and ultimate structure of the elements.

The spectroscope is the chief means by which these new territories have been gained for science and explored, and the photographic plate has not only been its faithful scribe, but has also gained distinction as an astronomical artist. Individually and jointly, the prism and the camera have increased our knowledge of the nature and number of all classes of celestial